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EPA

Status of Rulemaking on Emissions Standards and Controls

STATUS OF RULEMAKING ON EMISSIONS STANDARDS AND CONTROLS

The Agency is in the process of upgrading its emissions standards controls for hazardous waste combustors (HWCs). Revised regulations for incinerators, cement kilns, light-weight aggregate kilns, and metals recovery furnaces are scheduled to be proposed in September 1995 and promulgated in December 1996. Revised regulations for other HWCs, such as boilers and halogen acid furnaces are scheduled to be proposed in September 1998 and promulgated in December 1999. The Agency is making every effort to beat these schedules, and hopes that it may be possible to include revised regulations for boilers as part of the first phase of the rulemakings.

Concerns with Existing Controls

EPA established emissions standards and controls for hazardous waste incinerators in 1981 and for boilers and industrial furnaces (BIFs) burning hazardous waste in 1991. Given that the regulatory emission standards for BIFs are more comprehensive than the standards for incinerators (e.g., the BIF rules establish emission limits for toxic metals while the Agency must rely on its omnibus permit authority to control toxic metals from incinerators), the Agency proposed in 1989 to revise the incinerator standards to conform with the (at that time) proposed BIF standards. The Agency has never finalized the proposed standards for incinerators.

The Agency believes that emissions standards and controls for HWCs should be upgraded for several reasons. First, the Agency is concerned that the current regulations may not always ensure that HWCs use best operating practices to minimize emissions of hazardous air pollutants. Standards for some pollutants (e.g., metals, HCl, Cl_2) are based on levels that will not result in significant health risk considering exposure via inhalation. The levels of protection provided by such standards is problematic, however, because some pollutants can pose health risks via means of exposure other than inhalation, such as uptake through the food chain. In addition, HWCs can often meet the risk-based standards without using good operating practices. (To address these two points, the Agency is requiring that a risk assessment be conducted, including indirect exposure, before a permit decision is made.)

Second, the current regulations do not establish limits for chlorinated dioxins and furans (D/Fs) for most HWCs. Although the current regulations establish risk-based limits for D/Fs for BIFs that operate under certain conditions, most HWCs are not subject to explicit D/F emission limits. Given the high toxicity of some D/F congeners and the fact that good operating conditions alone may not always control emissions of D/Fs, EPA believes that emission limits are necessary. As discussed below, the Agency's

intent is to develop revised technology-based emission limits for D/F for HWCs.

Finally, the Agency has agreed to propose upgraded emissions standards for HWCs under a Settlement Agreement resulting from litigation on the BIF rule. The rulemaking schedule discussed above was established in that Settlement Agreement.

Promulgation under Joint RCRA and CAA Authority

The Agency intends to develop the technical emissions standards for HWCs under Resource Conservation and Recovery Act (RCRA) and the Clean Air Act (CAA) authorities. This is because the Agency has already targeted several types of HWCs (i.e., incinerators, boilers, cement kilns) as source categories under Section 112 of the CAA. Thus, the Agency is required to establish National Emission Standards for Hazardous Air Pollutants (NESHAPs) for these HWCs. Under Section 112, the Agency will establish Maximum Achievable Control Technology (MACT) standards for these source categories. Given that the Agency is mandated to regulate several types of HWCs under both the CAA and RCRA, the Agency's intent is to promulgate the upgraded standards under joint authority. This will minimize the regulatory development burden on the Agency and minimize the burden on the regulated community by avoiding piecemeal or sequential regulation.

EPA's Office of Solid Waste is coordinating with the Office of Air and Radiation in developing the emissions standards. To ensure that it also meets its RCRA mandate, the Agency is considering options to address the residual risk that would result from compliance with the MACT standards. The options being considered include using representative facilities to evaluate the residual risk (considering multi-pathway exposures) that could be posed after compliance with the MACT standards and/or use of site-specific risk assessments.

To regulate all HWCs under joint CAA and RCRA authority, the Agency plans to propose adding to the list of MACT source categories those types of HWCs that are not currently on the list (e.g., light-weight aggregate kilns). These proposals would be announced concurrently with the proposed emission standards.

HAPs to be Regulated

The hazardous air pollutants (HAPs) that the Agency is considering regulating under the rulemakings are: chlorinated dioxins/furans (D/Fs); 11 toxic metals; non-D/F toxic organic compounds; HCl and Cl_2. In addition, the Agency is considering whether to establish emission limits for particulate matter (PM), either to supplement its controls for toxic metals or to supplement its controls for toxic organic compounds (i.e.,

because some organics condense on PM and can be controlled by controlling PM). Further, the Agency is considering using surrogates (e.g., carbon monoxide, total hydrocarbons) to control emissions of non-D/F toxic organics given the impracticability of limiting dozens of individual organic compounds. Under this approach, MACT standards would be established for the surrogate(s).

Enhanced Monitoring

The Agency is undertaking a substantial effort to accelerate the development and commercial availability of continuous emissions monitors (CEMs). Full-scale testing is scheduled in January 1995 for three PM CEMs. In addition, the Agency has applied for funding in 1995 through the Environmental Technology Initiative to pursue the development and validation of a multi-metals CEM. Finally, the Agency is considering the practicability of field testing in early 1995 CEMs for organic compounds (e.g., a CEM for polycyclic aromatic hydrocarbons (PAHs)).

Progress to Date

CETRED. In May 1994, EPA released a Combustion Emissions Technical Resource Document (CETRED) that presented a preliminary technical analysis of available dioxin and furan (D/F) and particulate matter (PM) emissions data from existing hazardous waste combustion facilities. EPA released CETRED to give the regulated community and other interested persons the earliest possible opportunity to understand the nature of the technical analysis that EPA is pursuing. The Agency received approximately 30 comments on the document, and will carefully consider those comments as it continues with the analyses to develop and support MACT emission standards.

Emissions Testing Program. To better understand the capabilities of control technologies, the Agency is developing an extensive emissions testing program. To date, the Agency plans, among others, to conduct the following tests: (1) PM and metals controls achievable with an add-on control device to an incinerator with a wet control system; (2) D/F formation mechanisms and control options for cement kilns, including the use of inhibitors and the relationship between chlorine in the feed and D/F emissions. This and other testing is scheduled to be conducted in January-March 1995.